CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

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TENTATIVE ORDER NO. R9-2012-0041
NPDES NO. CA0107417

AN ORDER MODIFYING ORDER NO. R9-2008-0096 NPDES NO. CA0109347 MARINE CORPS BASE, CAMP PENDLETON SOUTHERN REGION TERTIARY TREATMENT PLANT DISCHARGE TO THE PACIFIC OCEAN THROUGH THE OCEANSIDE OCEAN OUTFALL, SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter San Diego Water Board), finds that:

1. Order No. R9-2008-0096, National Pollutant Discharge Elimination System (NPDES) No. CA0109347, prescribes waste discharge requirements for Marine Corps Base, Camp Pendleton (Discharger) to discharge up to 3.6 million gallons per day (MGD) of secondary and tertiary treated effluent from the Southern Region Tertiary Treatment Plant (SRTTP) into the Pacific Ocean through the Oceanside Ocean Outfall (Oceanside OO).

2. The Discharger submitted a Report of Waste Discharge (ROWD) dated November 29, 2011, for a modification of Order No. R9-2008-0096 that would establish requirements for a new discharge to the Oceanside OO of waste brine from the Advanced Water Treatment (AWT) Plant located at Haybarn Canyon, a potable water supply treatment facility on Marine Corps Base, Camp Pendleton (MCB) and for upgrades to the SRTTP. The ROWD states that comingled discharge of brine and effluent from SRTTP will not exceed 3.6 MGD.

3. SRTTP is being expanded from a daily average design capacity of 5 MGD to 7.5 MGD (with daily peaks at 10 MGD). After expansion, SRTTP's treatment train will consist of two mechanical bar screens, two rotary drum screens with a bypass channel equipped with a manually cleaned bar rack, two grit vortices, alum injection, seven sequencing batch reactors (SBRs), methanol feed for enhanced nitrogen removal, three equalization basins for the SBRs, four disk filters, and two chlorine contact basins. The plant expansion will also include upgrades to the sludge handling process.

4. The AWT at Haybarn Canyon will supplement the existing Iron and Manganese (IM) Plant 24 facility, which treats groundwater extracted from potable water supply source wells located within the Ysidora Hydrologic Area (902.10) on MCB. The AWT processes include carbon adsorption, cartridge filters, reverse osmosis (RO), neutralization, and disinfection. The AWT will treat 8.64 MGD of groundwater, which will result in 1.73 MGD of waste brine (i.e., RO concentrate). The Discharger is proposing to discharge the brine, with the effluent from SRTTP, to the Pacific Ocean through the Oceanside OO for an interim period during the construction of a permanent sub-surface brine disposal diffuser outfall at the beach northwest of Del Mar Harbor and, thereafter, on an as needed basis. The discharge from the diffuser will be

regulated with individual waste discharge requirements.

5. The discharge of brine to the Pacific Ocean is subject to the *Water Quality Control Plan, Ocean Waters of California* (Ocean Plan), including: Table A, which establishes technology-based effluent limitations for oil and grease, suspended solids, settleable solids, turbidity, and pH; Table B, which establishes the water quality objective; and provisions for implementing Table B in waste discharge requirements. A detailed discussion of the development of effluent limitations for the brine discharge that are based upon Table A and for the combined discharge that are based upon Table B is included in the Fact Sheet (Attachment A to this Order).

6. Minor changes to Order No. R9-2008-0096 are necessary to clarify findings and requirements.

7. The permitted discharge as modified by Order No. R9-2012-0041 is consistent with the antidegradation provision of Clean Water Act section 131.12 and State Water Resources Control Board (State Water Board) Resolution No. 68-16 as the changes will not result in a relaxation of any water quality based effluent limitation.

8. The San Diego Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment A), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order.

9. Under California Water Code Section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code Sections 21100-21177.

10. The San Diego Water Board has notified the Discharger and all known interested persons of the intent to modify Order No. R9-2008-0096, NPDES No. CA0109347.

11. The San Diego Water Board in a public meeting has heard and considered all comments pertaining to the proposed modifications to the NPDES Order.

IT IS HEREBY ORDERED, that:

Except as modified or superseded by the permit modifications set forth below, all of the findings, prohibitions, provisions, and other requirements of Order No. R9-2008-0096, NPDES No. CA0109347 remain in full force and effect. The following modifications of Order No. R9-2008-0096, NPDES No. CA0109347 are shown in **bold and underline/**~~strikeout~~ format to indicate added and removed language, respectively, and are hereby incorporated and immediately effective:

Modification 1. Table 1, Discharger Information, shall be modified as follows:

Table 1. Discharger Information

Discharger	Marine Corps Base, Camp Pendleton
Name of Facility	Southern Region Tertiary Treatment Plant
	Advanced Water Treatment Facility at Haybarn Canyon
Facility Address	Marine Corps Base
	Camp Pendleton, CA 92055
	San Diego County
The United States Environmental Protection Agency and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

Modification 2. Table 2, Discharge Location, shall be modified as follows:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Secondary- and tertiary-treated effluent **and waste brine**	33º 09' 46" N	117º 23' 28" W	Pacific Ocean

Modification 3. Table 4, Facility Information, shall be modified as follows:

Table 4. Facility Information

Discharger	Marine Corps Base, Camp Pendleton
Name of Facility	Southern Region Tertiary Treatment Plant
	Advanced Water Treatment Facility at Haybarn Canyon
Facility Address	Marine Corps Base
	Camp Pendleton, CA 92055
	San Diego County
Facility Contact, Title, and Phone	~~Luis Ledesma~~**Brian Y. Shin** Wastewater Branch Head Assistant Chief of Staff Environmental Security (760) 725-0141
Mailing Address	Box 555008, Camp Pendleton, CA 92055
Type of Facility	Wastewater treatment facility for military base (federal facility)
	Potable water treatment facility (federal facility)
Facility Flow Rate	• 3.6 million gallons per day (MGD) combined (permitted); • ~~5.0~~**Southern Regional Tertiary Treatment Plant – 7.5** MGD (**daily average** design **capacity**) • **Advanced Water Treatment Facility at Haybarn Canyon – 1.73 MGD (design) of waste brine**

Modification 4. Section IV.A.1 shall be modified to incorporate effluent limitations for the AWT at Haybarn Canyon as follows:

1. Final Effluent Limitations – Discharge Point No. 001

The discharge of effluent to Discharge Point No. 001 shall be measured at Monitoring Location EFF-001**, EFF-002, and EFF-003** as described in Attachment E, Monitoring and Reporting Program, except as otherwise noted. The effluent limitations and performance goals below are enforceable to the number of significant digits given in the effluent limitation or performance goal.

a. The Discharger shall maintain compliance with the following effluent limitations **for SRTTP** at ~~Discharge Point No. 001, with compliance measured at~~ Monitoring Location No. EFF-00**2**~~1~~ as described in the attached MRP:

Table 7. Effluent Limitations Based on Secondary Treatment Requirements and Table A of the Ocean Plan **at EFF-002**

Parameter	Unit	Effluent Limitations		
		Average Monthly	Average Weekly	Instantaneous Maximum
~~Flow Rate~~	~~MGD~~	~~3.6~~		
BOD_5[1]	mg/L	30	45	
	lbs/day[3]	**901**	**1351**	
TSS[1]	mg/L	30	45	--
	lbs/day[3]	**901**	**1351**	
Oil and Grease	mg/L	25	40	75
	lbs/day[3]	**751**	**1201**	**2252**
Settleable Solids	ml/L	1.0	1.5	3.0
Turbidity	NTU	75	100	225
pH	Standard unit	--	--	[2]

1 The average monthly percent removal of BOD 5-day 20°C and total suspended solids shall not be less than 85 percent.

2 Within limit of 6.0 to 9.0 at all times.

3 **Mass limits were determined using a flow of 3.6 MGD and the following equation: lbs/day = permitted flow (MGD) x pollutant concentration (mg/L) x 8.34.**

b. The Discharger shall maintain compliance with the following effluent limitations for the AWT at Haybarn Canyon at Monitoring Location EFF-003, as described in the attached MRP:

Table 8. Effluent Limitations Based on Table A of the Ocean Plan at EFF-003

Parameter	Unit	Effluent Limitations		
		Average Monthly	Average Weekly	Instantaneous Maximum
TSS	**mg/L**	**60**		
	lbs/day[1]	**866**		
Oil and Grease	**mg/L**	**25**	**40**	**75**

Parameter	Unit	Effluent Limitations		
		Average Monthly	Average Weekly	Instantaneous Maximum
	lbs/day[1]	361-	557	1082
Settleable Solids	ml/L	1.0	1.5	3.0
Turbidity	NTU	75	100	225
pH				[2]

[1] Mass limits were determined using a flow of 1.73 MGD and the following equation: lbs/day = permitted flow (MGD) x pollutant concentration (mg/L) x 8.34.

[2] Within limit of 6.0 to 9.0 at all times.

~~b.~~ **c.** The discharge of effluent from the Discharger's Facilities to Discharge Point No. 001, as monitored at Monitoring Location EFF-001, shall maintain compliance with the following effluent limitations:

Table ~~8~~**9**. Effluent Limitations ~~Based on the Ocean Plan~~ **at EFF-001**

Parameter	Unit	Water Quality-Based Effluent Limitations[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
Flow	MGD	3.6			
BASED ON OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE					
Chronic Toxicity[2]	TUc	NA	145	NA	--
Copper, Total Recoverable	µg/L	9.00E+01	8.82E+02	2.47E+03	--
	lb/day	2.70E+00	2.65E+01	7.40E+01	--
Total Residual Chlorine	µg/L	1.76E+02	7.04E+02	5.28E+03	--
	lb/day	5.28E+00	2.11E+01	1.59E+02	--
Endrin	µg/L	1.76E-01	3.52E-01	5.28E-01	--
	lb/day	5.28E-03	1.06E-02	1.59E-02	--
HCH[3]	µg/L	3.52E-01	7.04E-01	1.06E+00	--
	lb/day	1.06E-02	2.11E-02	3.17E-02	--
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – CARCINOGENS					
Aldrin	µg/L	--	--	--	1.94E-03
	lb/day	--	--	--	5.81E-05
Beryllium	µg/L	--	--	--	2.90E+00
	lb/day	--	--	--	8.72E-02
Dieldrin	µg/L	--	--	--	3.52E-03
	lb/day	--	--	--	1.06E-04
Heptachlor	µg/L	--	--	--	4.40E-03
	lb/day	--	--	--	1.32E-04
Heptachlor Epoxide	µg/L	--	--	--	1.76E-03
	lb/day	--	--	--	5.28E-05
Hexachlorobenzene	µg/L	--	--	--	1.85E-02
	lb/day	--	--	--	5.55E-04
PCBs[4]	µg/L	--	--	--	1.67E-03

	lb/day	--	--	--	5.02E-05
TCDD equivalents[5]	µg/L	--	--	--	3.43E-07
	lb/day	--	--	--	1.03E-08
Toxaphene	µg/L	--	--	--	1.85E-02
	lb/day	--	--	--	5.55E-04

1 Scientific "E" notation is used to express certain values. In scientific "E" notation, the number following the "E" indicates that position of the decimal point in the value. Negative numbers after the "E" indicate that the value is less than 1, and positive numbers after the "E" indicate that the value is greater than 1. In this notation a value of 6.1E-02 represents 6.1×10^{-2} or 0.061, 6.1E+02 represents 6.1×10^{2} or 610, and 6.1E+00 represents 6.1×10^{0} or 6.1.

2 Chronic toxicity expressed as Chronic Toxicity Units (TUc) = 100/NOEL, where NOEL (No Observed Effect Level) is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism.

3 HCH (hexachlorocyclohexane) represents the sum of the alpha, beta, gamma (Lindane), and delta isomers of hexachlorocyclohexane.

4 PCBs (polychlorinated biphenyls) represent the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Arolclor-1254, and Arcolor-1260.

5 TCDD equivalents represent the sum of concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown by the table below. USEPA Method 8280 may be used to analyze TCDD equivalents.

Isomer Group	Toxicity Equivalence Factor
2,3,7,8 – tetra CDD	1.0
2,3,7,8 – penta CDD	0.5
2,3,7,8 – hexa CDD	0.1
2,3,7,8 – hepta CDD	0.01
octa CDD	0.001
2,3,7,8 – tetra CDF	0.1
1,2,3,7,8 – penta CDF	0.05
2,3,4,7,8 – penta CDF	0.5
2,3,7,8 – hexa CDFs	0.1
2,3,7,8 – hepta CDFs	0.01
Octa CDF	0.001

~~c.~~**d.** Constituents that do not have reasonable potential or had inconclusive reasonable potential analysis results are referred to as performance goal constituents and assigned the performance goals listed in the following table. Performance goal constituents shall also be monitored at EFF-001, but the results will be used for informational purposes only, not compliance determination.

Table ~~9~~10. Performance Goals Based on the Ocean Plan

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
BASED ON OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE					

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
Arsenic, Total Recoverable	µg/L	4.43E+02	2.56E+03	6.78E+03	--
	lb/day	1.33E+01	7.67E+01	2.04E+02	--
Cadmium, Total Recoverable	µg/L	8.80E+01	3.52E+02	8.80E+02	--
	lb/day	2.64E+00	1.06E+01	2.64E+01	--
Chromium VI, Total Recoverable [2]	µg/L	1.76E+02	7.04E+02	1.76E+03	--
	lb/day	5.28E+00	2.11E+01	5.28E+01	--
Lead, Total Recoverable	µg/L	1.76E+02	7.04E+02	1.76E+03	--
	lb/day	5.28E+00	2.11E+01	5.28E+01	--
Mercury, Total Recoverable	µg/L	3.48E+00	1.40E+01	3.52E+01	--
	lb/day	1.04E-01	4.21E-01	1.06E+00	--
Nickel, Total Recoverable	µg/L	4.40E+02	1.76E+03	4.40E+03	--
	lb/day	1.32E+01	5.28E+01	1.32E+02	--
Selenium, Total Recoverable	µg/L	1.32E+03	5.28E+03	1.32E+04	--
	lb/day	3.96E+01	1.59E+02	3.96E+02	--
Silver, Total Recoverable	µg/L	4.77E+01	2.32E+02	6.02E+02	--
	lb/day	1.43E+00	6.98E+00	1.81E+01	--
Zinc, Total Recoverable	µg/L	1.06E+03	6.34E+03	1.69E+04	--
	lb/day	3.19E+01	1.90E+02	5.08E+02	--
Cyanide, Total Recoverable [3]	µg/L	8.80E+01	3.52E+02	8.80E+02	--
	lb/day	2.64E+00	1.06E+01	2.64E+01	--
Ammonia (expressed as nitrogen)	µg/L	5.28E+04	2.11E+05	5.28E+05	--
	lb/day	1.59E+03	6.34E+03	1.59E+04	--
Acute Toxicity	TUa	NA	2.64E+01	NA	--
Phenolic Compounds (non-chlorinated)	µg/L	2.64E+03	1.06E+04	2.64E+04	--
	lb/day	7.93E+01	3.17E+02	7.93E+02	--
Chlorinated Phenolics	µg/L	8.80E+01	3.52E+02	8.80E+02	--
	lb/day	2.64E+00	1.06E+01	2.64E+01	--
~~Endosulfan[11]~~ **Endosulfan[7]**	µg/L	7.92E-01	1.58E+00	2.38E+00	--
	lb/day	2.38E-02	4.76E-02	7.13E-02	--
~~Endrin~~	~~µg/L~~	~~1.76E-01~~	~~3.52E-01~~	~~5.28E-01~~	~~--~~
	~~lb/day~~	~~5.28E-03~~	~~1.06E-02~~	~~1.59E-02~~	~~--~~
~~HCH[4]~~	~~µg/L~~	~~3.52E-01~~	~~7.04E-01~~	~~1.06E+00~~	~~--~~
	~~lb/day~~	~~1.06E-02~~	~~2.11E-02~~	~~3.17E-02~~	~~--~~
Radioactivity	pci/l	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the California Code of Regulations, Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.			
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – NONCARCINOGENS					
Acrolein	µg/L	--	--	--	1.94E+04

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
	lb/day	--	--	--	5.81E+02
Antimony	µg/L	--	--	--	1.06E+05
	lb/day	--	--	--	3.17E+03
Bis(2-chloroethoxy) Methane	µg/L	--	--	--	3.87E+02
	lb/day	--	--	--	1.16E+01
Bis(2-chloroisopropyl) Ether	µg/L	--	--	--	1.06E+05
	lb/day	--	--	--	3.17E+03
Chlorobenzene	µg/L	--	--	--	5.02E+04
	lb/day	--	--	--	1.51E+03
Chromium (III), Total Recoverable	µg/L	--	--	--	1.67E+07
	lb/day	--	--	--	5.02E+05
Di-n-butyl Phthalate	µg/L	--	--	--	3.08E+05
	lb/day	--	--	--	9.25E+03
~~Dichlorobenzenes[5]~~ **Dichlorobenzenes[4]**	µg/L	--	--	--	4.49E+05
	lb/day	--	--	--	1.35E+04
Diethyl Phthalate	µg/L	--	--	--	2.90E+06
	lb/day	--	--	--	8.72E+04
Dimethyl Phthalate	µg/L	--	--	--	7.22E+07
	lb/day	--	--	--	2.17E+06
4,6-dinitro-2-methylphenol	µg/L	--	--	--	1.94E+04
	lb/day	--	--	--	5.81E+02
2,4-dinitrophenol	µg/L	--	--	--	3.52E+02
	lb/day	--	--	--	1.06E+01
Ethylbenzene	µg/L	--	--	--	3.61E+05
	lb/day	--	--	--	1.08E+04
Fluoranthene	µg/L	--	--	--	1.32E+03
	lb/day	--	--	--	3.96E+01
Hexachlorocyclopentadiene	µg/L	--	--	--	5.10E+03
	lb/day	--	--	--	1.53E+02
Nitrobenzene	µg/L	--	--	--	4.31E+02
	lb/day	--	--	--	1.29E+01
Thallium, Total Recoverable	µg/L	--	--	--	1.76E+02
	lb/day	--	--	--	5.28E+00
Toluene	µg/L	--	--	--	7.48E+06
	lb/day	--	--	--	2.25E+05
Tributyltin	µg/L	--	--	--	1.23E-01
	lb/day	--	--	--	3.70E-03
1,1,1-trichloroethane	µg/L	--	--	--	4.75E+07

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
	lb/day	--	--	--	1.43E+06
BASED ON OBJECTIVES FOR PROTECTION OF HUMAN HEALTH - CARCINOGENS					
Acrylonitrile	µg/L	--	--	--	8.80E+00
	lb/day	--	--	--	2.64E-01
~~Aldrin~~	~~µg/L~~	~~--~~	~~--~~	~~--~~	~~1.94E-03~~
	~~lb/day~~	~~--~~	~~--~~	~~--~~	~~5.81E-05~~
Benzene	µg/L	--	--	--	5.19E+02
	lb/day	--	--	--	1.56E+01
Benzidine	µg/L	--	--	--	6.07E-03
	lb/day	--	--	--	1.82E-04
~~Beryllium~~	~~µg/L~~	~~--~~	~~--~~	~~--~~	~~2.90E+00~~
	~~lb/day~~	~~--~~	~~--~~	~~--~~	~~8.72E-02~~
Bis(2-chloroethyl) Ether	µg/L	--	--	--	3.96E+00
	lb/day	--	--	--	1.19E-01
Bis(2-ethlyhexyl) Phthalate	µg/L	--	--	--	3.08E+02
	lb/day	--	--	--	9.25E+00
Carbon Tetrachloride	µg/L	--	--	--	7.92E+01
	lb/day	--	--	--	2.38E+00
~~Chlorodane~~**Chlordane**	µg/L	--	--	--	2.02E-03
	lb/day	--	--	--	6.08E-05
Chlorodibromethane	µg/L	--	--	--	7.57E+02
	lb/day	--	--	--	2.27E+01
Chloroform	µg/L	--	--	--	1.14E+04
	lb/day	--	--	--	3.43E+02
~~DDT[6]~~**DDT[5]**	µg/L	--	--	--	1.50E-02
	lb/day	--	--	--	4.49E-04
1,4-dichlorobenzene	µg/L	--	--	--	1.58E+03
	lb/day	--	--	--	4.76E+01
3,3'-dichlorobenzidine	µg/L	--	--	--	7.13E-01
	lb/day	--	--	--	2.14E-02
1,2-dichloroethane	µg/L	--	--	--	2.46E+03
	lb/day	--	--	--	7.40E+01
1,1-dichloroethylene	µg/L	--	--	--	7.92E+01
	lb/day	--	--	--	2.38E+00
Dichlorobromomethane	µg/L	--	--	--	5.46E+02
	lb/day	--	--	--	1.64E+01
Dichloromethane	µg/L	--	--	--	3.96E+04
	lb/day	--	--	--	1.19E+03

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
1,3-dichloropropene	µg/L	--	--	--	7.83E+02
	lb/day	--	--	--	2.35E+01
~~Dieldrin~~	~~µg/L~~	~~--~~	~~--~~	~~--~~	~~3.52E-03~~
	~~lb/day~~	~~--~~	~~--~~	~~--~~	~~1.06E-04~~
2,4-dinitrotoluene	µg/L	--	--	--	2.29E+02
	lb/day	--	--	--	6.87E+00
1,2-diphenylhydrazine	µg/L	--	--	--	1.41E+01
	lb/day	--	--	--	4.23E-01
~~Halomethanes[7]~~ **Halomethanes[6]**	µg/L	--	--	--	1.14E+04
	lb/day	--	--	--	3.43E+02
~~Heptachlor~~	~~µg/L~~	~~--~~	~~--~~	~~--~~	~~4.40E-03~~
	~~lb/day~~	~~--~~	~~--~~	~~--~~	~~1.32E-04~~
~~Heptachlor Epoxide~~	~~µg/L~~	~~--~~	~~--~~	~~--~~	~~1.76E-03~~
	~~lb/day~~	~~--~~	~~--~~	~~--~~	~~5.28E-05~~
~~Hexachlorobenzene~~	~~µg/L~~	~~--~~	~~--~~	~~--~~	~~1.85E-02~~
	~~lb/day~~	~~--~~	~~--~~	~~--~~	~~5.55E-04~~
Hexachlorobutadiene	µg/L	--	--	--	1.23E+03
	lb/day	--	--	--	3.70E+01
Hexachloroethane	µg/L	--	--	--	2.20E+02
	lb/day	--	--	--	6.61E+00
Isophorone	µg/L	--	--	--	6.42E+04
	lb/day	--	--	--	1.93E+03
N-nitrosodimethylamine	µg/L	--	--	--	6.42E+02
	lb/day	--	--	--	1.93E+01
N-nitrosodi-N-propylamine	µg/L	--	--	--	3.34E+01
	lb/day	--	--	--	1.00E+00
N-nitrosodiphenylamine	µg/L	--	--	--	2.20E+02
	lb/day	--	--	--	6.61E+00
~~PAHs[8]~~	~~µg/L~~	~~--~~	~~--~~	~~--~~	~~7.74E-01~~
	~~lb/day~~	~~--~~	~~--~~	~~--~~	~~2.33E-02~~
~~PCBs[9]~~	~~µg/L~~	~~--~~	~~--~~	~~--~~	~~1.67E-03~~
	~~lb/day~~	~~--~~	~~--~~	~~--~~	~~5.02E-05~~
~~TCDD equivalents[10]~~	~~µg/L~~	~~--~~	~~--~~	~~--~~	~~3.43E-07~~
	~~lb/day~~	~~--~~	~~--~~	~~--~~	~~1.03E-08~~
1,1,2,2-tetrachloroethane	µg/L	--	--	--	2.02E+02
	lb/day	--	--	--	6.08E+00
Tetrachloroethylene	µg/L	--	--	--	1.76E+02
	lb/day	--	--	--	5.28E+00

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
~~Toxaphene~~	~~µg/L~~	~~--~~	~~--~~	~~--~~	~~1.85E-02~~
	~~lb/day~~	~~--~~	~~--~~	~~--~~	~~5.55E-04~~
Trichloroethylene	µg/L	--	--	--	2.38E+03
	lb/day	--	--	--	7.13E+01
1,1,2-trichloroethane	µg/L	--	--	--	8.27E+02
	lb/day	--	--	--	2.48E+01
2,4,6-trichlorophenol	µg/L	--	--	--	2.55E+01
	lb/day	--	--	--	7.66E-01
Vinyl Chloride	µg/L	--	--	--	3.17E+03
	lb/day	--	--	--	9.51E+01

[1] Scientific "E" notation is used to express certain values. In scientific "E" notation, the number following the "E" indicates that position of the decimal point in the value. Negative numbers after the "E" indicate that the value is less than 1, and positive numbers after the "E" indicate that the value is greater than 1. In this notation a value of 6.1E-02 represents 6.1×10^{-2} or 0.061, 6.1E+02 represents 6.1×10^{2} or 610, and 6.1E+00 represents 6.1×10^{0} or 6.1.

[2] Dischargers may, at their option, meet this limitation (or apply this performance goal) as a total chromium limitation (or performance goal).

[3] If a Discharger can demonstrate to the satisfaction of the Regional Water Board (subject to USEPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by (or performance goals may be evaluated with) the combined measurement of free cyanide, simple alkali metals cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR 136, as revised May 14, 1999.

[4] ~~HCH (hexachlorocyclohexane) represents the sum of the alpha, beta, gamma (Lindane), and delta isomers of hexachlorocyclohexane.~~

[5~~4~~] Dichlorobenzenes represent the sum of 1,2- and 1,3-dichlorobenzene.

[6~~5~~] DDD (dichlorodiphenyldichloroethane), DDE (dichlorodiphenyldichloroethylene), and DDT (dichlorodiphenyltrichloroethane) represent the sum of 4,4'DDT; 2,4'DDT; 4,4'DDE; 2,4'DDE; 4,4'DDD; and 2,4'DDD.

[7~~6~~] Halomethanes represent the sum of bromoform, bromomethane (methyl bromide), and chloromethane (methyl chloride).

[8] ~~PAHs (polynuclear aromatic hydrocarbons) represent the sum of acenapthalene; anthracene; 1,2-benzanthracene; 3,4 benzofluoranthene; benzo[k]fluoranthene; 1,1,2 benzoperylene; benzo[a]pyrene; chrysene; dibenzo[a,h]anthracene; fluorine; indeno[1,2,3-cd]pyrene; phenanthrene; and pyrene.~~

[9] ~~PCBs (polychlorinated biphenyls) represent the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor 1016, Aroclor 1221, Aroclor 1232, Aroclor 1242, Aroclor 1248, Arolclor 1254, and Arcolor-1260.~~

[10] ~~TCDD equivalents represent the sum of concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown by the table below. USEPA Method 8280 may be used to analyze TCDD equivalents.~~

~~Isomer Group~~	~~Toxicity Equivalence Factor~~
~~2,3,7,8 – tetra CDD~~	~~1.0~~
~~2,3,7,8 – penta CDD~~	~~0.5~~
~~2,3,7,8 – hexa CDD~~	~~0.1~~
~~2,3,7,8 – hepta CDD~~	~~0.01~~
~~octa CDD~~	~~0.001~~
~~2,3,7,8 – tetra CDF~~	~~0.1~~
~~1,2,3,7,8 – penta CDF~~	~~0.05~~

~~2,3,4,7,8 – penta CDF~~	~~0.5~~
~~2,3,7,8 – hexa CDFs~~	~~0.1~~
~~2,3,7,8 – hepta CDFs~~	~~0.01~~
~~Octa CDF~~	~~0.001~~

~~11~~7 Endosulfan shall mean the sum of alpha-endosulfan, beta-endosulfan, and endosulfan sulfate.

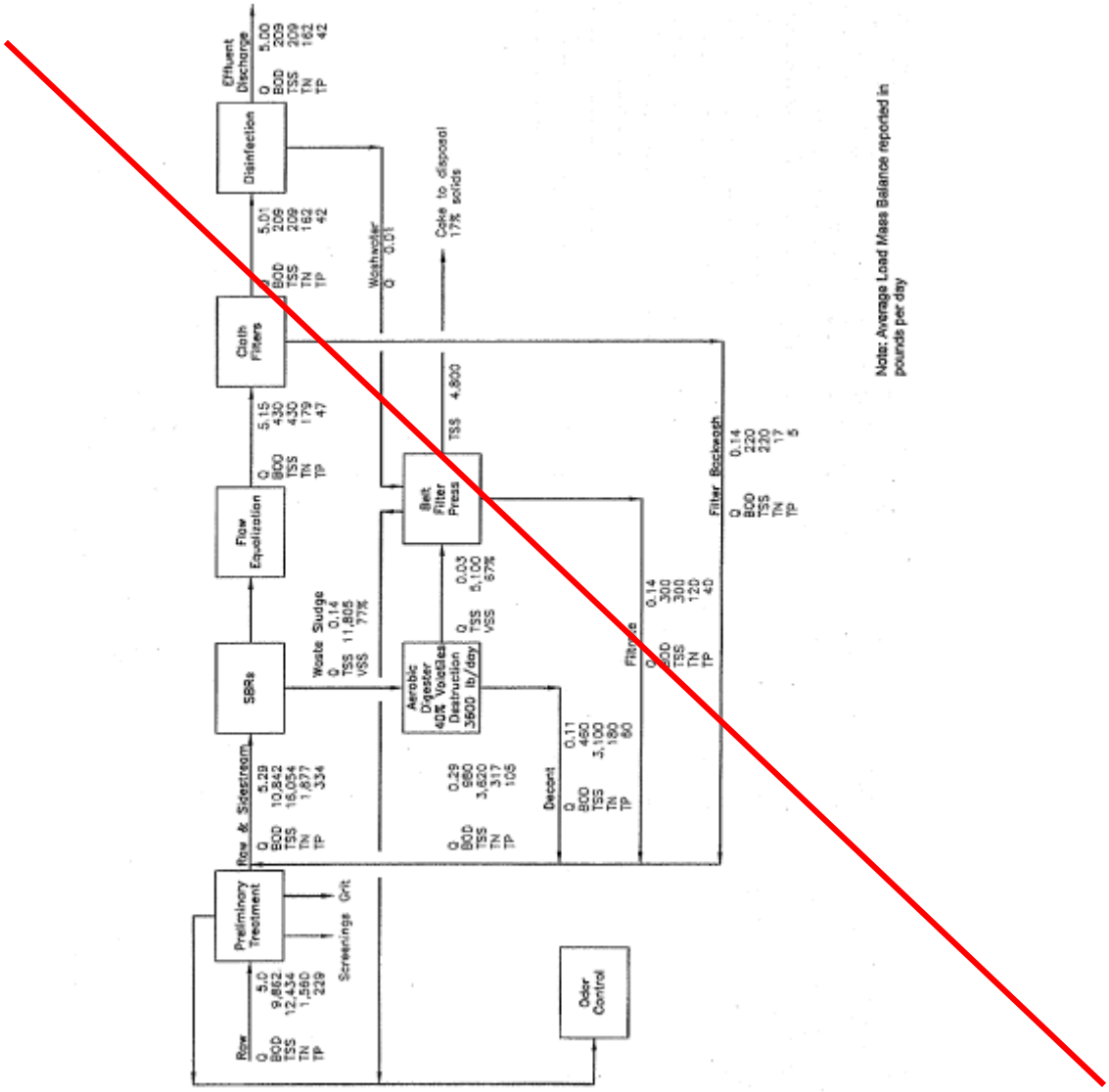
Modification 5. Section VI.C.5.c.ix shall be modified as follows:

The Discharger shall submit an annual report to the USEPA and the Regional Water Board containing monitoring results and pathogen and vector attraction reduction requirements, as specified by 40 CFR 503. The Discharger shall also report the quantity of sludge removed from the Facility and the disposal method. This self-monitoring report shall be postmarked by February 1**9** of each year and report for the period of the previous calendar year.

Modification 6. The definition of Chlordane in Attachment A shall be modified as follows:

Shall mean the sum of chlordane-alpha, chlordane-gamma, ~~chlordene-alpha, chlordene-gamma,~~ nonachlor-alpha, nonachlor-gamma, and oxychlordane. The sum shall include chlordane-alpha and chlordane-gamma when standards become available in the United States and when notified by the San Diego Water Board.

Modification 7. The following figure shall be deleted from Attachment C – Flow Schematics



CDM

Figure 2C-1
Average Load Mass Balance of Camp Pendleton Southern Region Tertiary Treatment Plant at Full Capacity

Modification 8. The following figure shall be added to Attachment C – Flow Schematics

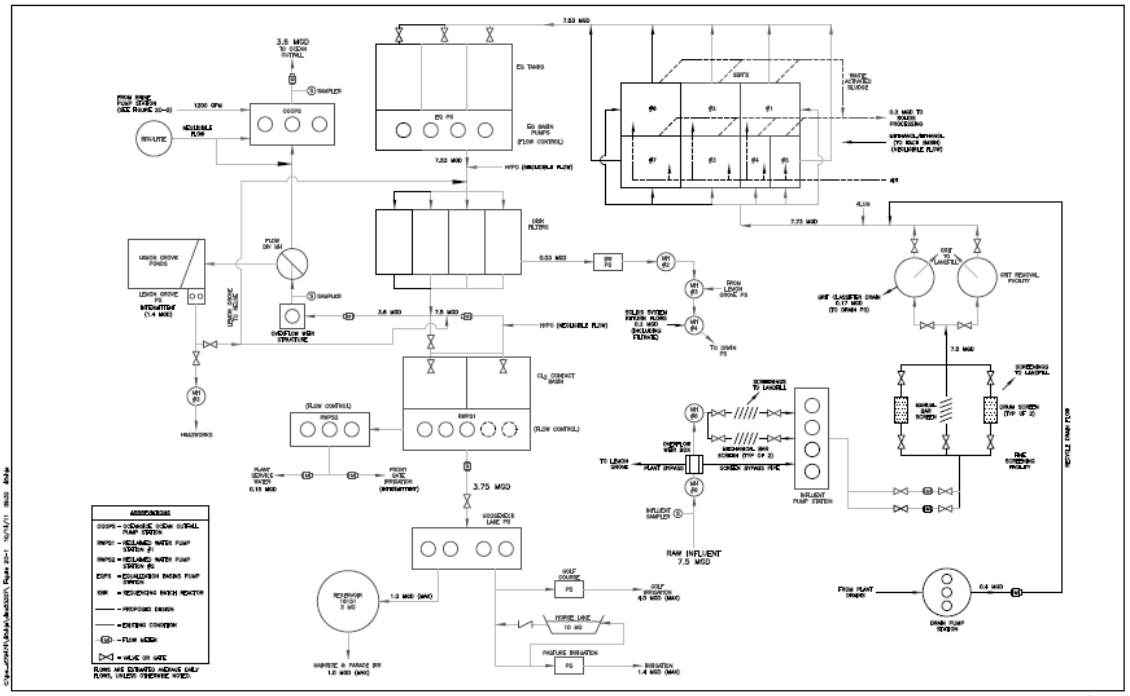


Figure 2C-1
South Regional Tertiary Treatment Plant
Line Diagram

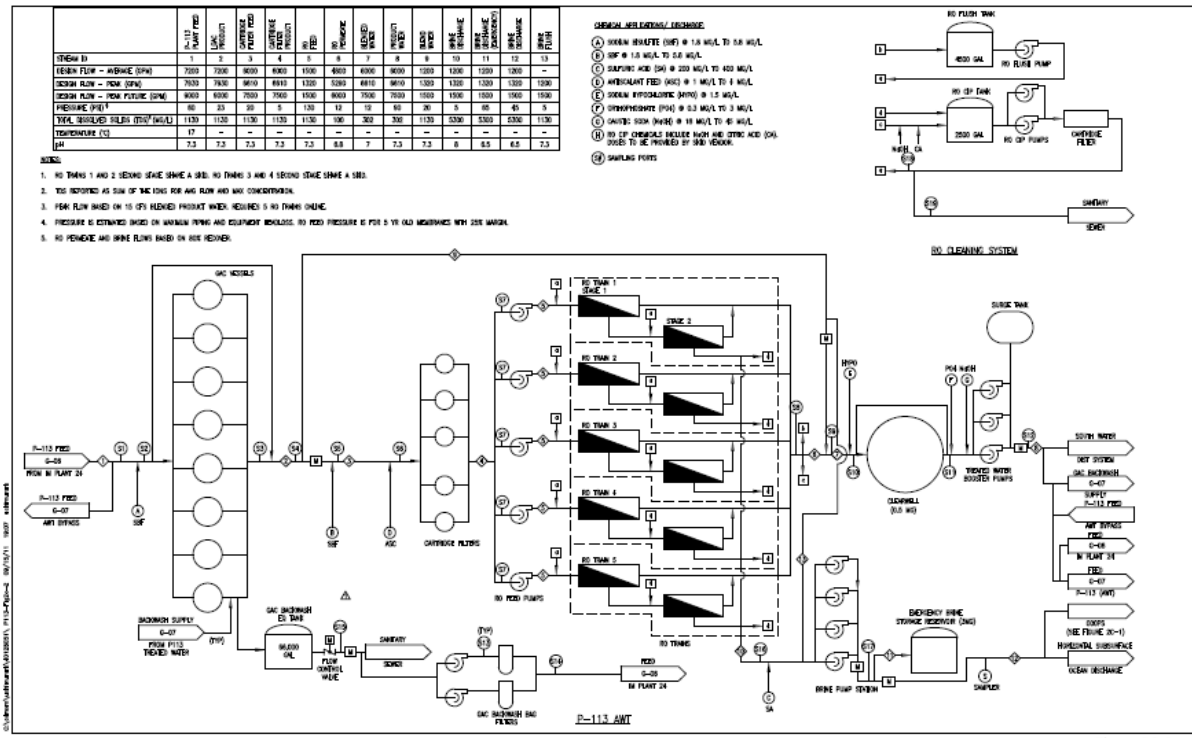


Figure 2C-2
Advanced Water Treatment Plant
Line Drawing

Modification 9. Table E-1 in Attachment E shall be modified as follows:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
--	INF-001	A location upstream of plant return streams **at the Southern Region Tertiary Treatment Plant (SRTTP)**, where a representative sample of the influent can be obtained
001	EFF-001	A location where ~~a~~ representative sample**s** of **commingled** ~~the~~ effluent **from SRTTP and AWT** can be obtained
	EFF-002	**Final effluent from SRTTP and downstream of any in-plant return flows and disinfection units, where representative samples of effluent treated solely at SRTTP can be collected**
	EFF-003	**Brine discharge from the Advanced Water Treatment (AWT) facility at Haybarn Canyon, prior to mixing with any other flows directed to the Oceanside Ocean Outfall (Oceanside OO).**
SURF ZONE STATONS		
--	S1	Surf zone, 5,500 feet south of the outfall
--	S2	Surf zone, 2,500 feet south of the outfall
--	S3	Surf zone, at the outfall (Latitude 33 09' 46"N; Longitude 117 23' 28"W)
--	S4	Surf zone, 2,000 feet north of the outfall
--	S5	Surf zone, 5,800 feet north of the outfall
NEAR SHORE STATIONS		
--	N1	Opposite S1, at the 30 foot depth contour, MLLW
--	N2	Opposite S2, at the 30 foot depth contour, MLLW
--	N3	Opposite S3, at the 30 foot depth contour, MLLW
--	N4	Opposite S4, at the 30 foot depth contour, MLLW
--	N5	Opposite S5, at the 30 foot depth contour, MLLW
OFFSHORE STATIONS		
--	A1 – A4	At the corners of a 1,000 ft. x 1,000 ft. square having one side parallel to shore and the intersection of its diagonals at the seaward end of the outfall
--	A5	At the intersection of its diagonals at the seaward end of the outfall
--	B1	One mile downcoast from the outfall, and over the same depth contour as Station A5
--	B2	One mile upcoast from the outfall, and over the same depth contour as Station A5
BIOLOGICAL TRANSECTS		
--	T0	At the 20, 40, 60, and 80 foot depth contours along the transect located 50 feet downcoast of and parallel to the outfall
--	T1	At the 20, 40, 60, and 80 foot depth contours along the transect located one mile downcoast of and parallel to the outfall
--	T2	At the 20, 40, 60, and 80 foot depth contours along the transect located one and one half miles upcoast of and parallel to the outfall

Modification 10. The heading of Table E-2 of Attachment E shall be modified as follows:

Table E-2. Influent Monitoring **(SRTTP)**

Modification 11. Section IV.A. of Attachment E shall be modified as follows and subsequent tables (Tables E-4 through E-13) shall be renumbered accordingly:

A. Monitoring Location EFF-001, EFF-002, and EFF-003

1. The Discharger shall monitor effluent at EFF-001 as follows.

Table E-3. Effluent Monitoring at EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow Rate	MGD	recorder/totalizer	continuous	1
~~BOD_5@20°C~~	~~mg/L~~	~~24-hr composite~~	~~1/day~~	~~1~~
	~~% removal~~	~~calculate~~	~~1/day~~	~~1~~
~~$CBOD_5$@20°C~~	~~mg/L~~	~~24-hr composite~~	~~1/month~~	~~1~~
Temperature	°C	grab	1/week	1
Total Residual Chlorine	µg/L	continuous	continuous	1
Dissolved Oxygen	mg/L	grab	1/week	1
~~TABLE A PARAMETERS~~				
~~Oil and Grease~~	~~mg/L~~	~~grab~~	~~1/week~~	~~1~~
~~Total Suspended Solids~~	~~mg/L~~	~~24-hr composite~~	~~1/day~~	~~1~~
	~~% removal~~	~~calculate~~	~~1/day~~	~~1~~
~~Settleable Solids~~	~~ml/L~~	~~grab~~	~~1/day~~	~~1~~
~~Turbidity~~	~~NTU~~	~~grab~~	~~1/week~~	~~1~~
~~pH~~	~~units~~	~~grab~~	~~1/day~~	~~1~~
TABLE B PARAMETERS FOR PROTECTION OF MARINE AQUATIC LIFE				
Arsenic, Total Recoverable	µg/L	24-hr composite	1/quarter	1
Cadmium, Total Recoverable	µg/L	24-hr composite	1/quarter	1
Chromium (VI), Total Recoverable[2]	µg/L	24-hr composite	1/quarter	1
Copper, Total Recoverable	µg/L	24-hr composite	1/month	1
Lead, Total Recoverable	µg/L	24-hr composite	1/quarter	1
Mercury, Total Recoverable	µg/L	24-hr composite	1/quarter	1
Nickel, Total Recoverable	µg/L	24-hr composite	1/quarter	1
Selenium, Total Recoverable	µg/L	24-hr composite	1/quarter	1
Silver, Total Recoverable	µg/L	24-hr composite	1/quarter	1
Zinc, Total Recoverable	µg/L	24-hr composite	1/quarter	1
Cyanide, Total Recoverable[3]	µg/L	24-hr composite	1/quarter	1
Ammonia (as N)	µg/L	24-hr composite	1/month	1
Phenolic Compounds (nonchlorinated)	µg/L	24-hr composite	1/quarter	1
Phenolic Compounds	µg/L	24-hr composite	1/quarter	1

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
(chlorinated)				
Endosulfan[11]	µg/L	24-hr composite	1/quarter	[1]
Endrin	µg/L	24-hr composite	1/quarter	[1]
HCH[4]	µg/L	24-hr composite	1/quarter	[1]
Radioactivity	pci/l	24-hr composite	1/quarter	[1]
TABLE B PARAMETERS FOR PROTECTION OF HUMAN HEALTH – NON CARCINOGENS				
Acrolein	µg/L	grab	2/year	[1]
Antimony	µg/L	24-hr composite	2/year	[1]
Bis(2-chloroethoxy)methane	µg/L	grab	2/year	[1]
Bis(2-chloroisopropyl) Ether	µg/L	grab	2/year	[1]
Chlorobenzene	µg/L	grab	2/year	[1]
Chromium (III), Total Recoverable	µg/L	24-hr composite	2/year	[1]
Di-n-butyl Phthalate	µg/L	grab	2/year	[1]
Dichlorobenzenes[5]	µg/L	grab	2/year	[1]
Diethyl Phthalate	µg/L	grab	2/year	[1]
Dimethyl Phthalate	µg/L	grab	2/year	[1]
4,6-dinitro-2-methylphenol	µg/L	grab	2/year	[1]
2,4-dinitrophenol	µg/L	grab	2/year	[1]
Ethylbenzene	µg/L	grab	2/year	[1]
Fluoranthene	µg/L	grab	2/year	[1]
Hexachlorocyclopentadiene	µg/L	grab	2/year	[1]
Nitrobenzene	µg/L	grab	2/year	[1]
Thallium, Total Recoverable	µg/L	24-hr composite	2/year	[1]
Toluene	µg/L	grab	2/year	[1]
Tributyltin	µg/L	24-hr composite	2/year	[1]
1,1,1-trichloroethane	µg/L	grab	2/year	[1]
TABLE B PARAMETERS FOR PROTECTION OF HUMAN HEALTH – CARCINOGENS				
Acrylonitrile	µg/L	grab	2/year	[1]
Aldrin	µg/L	24-hr composite	2/year	[1]
Benzene	µg/L	grab	2/year	[1]
Benzidine	µg/L	grab	2/year	[1]
Beryllium	µg/L	24-hr composite	2/year	[1]
Bis(2-chloroethyl) Ether	µg/L	grab	2/year	[1]
Bis(2-ethlyhexyl) Phthalate	µg/L	grab	2/year	[1]
Carbon Tetrachloride	µg/L	grab	2/year	[1]
Chlordane	µg/L	24-hr composite	2/year	[1]
Chlorodibromethane	µg/L	grab	2/year	[1]
Chloroform	µg/L	grab	2/year	[1]
DDT[6]	µg/L	24-hr composite	2/year	[1]
1,4-dichlorobenzene	µg/L	grab	2/year	[1]
3,3'-dichlorobenzidine	µg/L	grab	2/year	[1]
1,2-dichloroethane	µg/L	grab	2/year	[1]
1,1-dichloroethylene	µg/L	grab	2/year	[1]
Dichlorobromomethane	µg/L	grab	2/year	[1]
Dichloromethane	µg/L	grab	2/year	[1]
1,3-dichloropropene	µg/L	grab	2/year	[1]
Dieldrin	µg/L	24-hr composite	2/year	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
2,4-dinitrotoluene	µg/L	grab	2/year	[1]
1,2-diphenylhydrazine	µg/L	grab	2/year	[1]
Halomethanes[7]	µg/L	grab	2/year	[1]
Heptachlor	µg/L	24-hr composite	2/year	[1]
Heptachlor Epoxide	µg/L	24-hr composite	2/year	[1]
Hexachlorobenzene	µg/L	grab	2/year	[1]
Hexachlorobutadiene	µg/L	grab	2/year	[1]
Hexachloroethane	µg/L	grab	2/year	[1]
Isophorone	µg/L	grab	2/year	[1]
N-nitrosodimethylamine	µg/L	grab	2/year	[1]
N-nitrosodi-N-propylamine	µg/L	grab	2/year	[1]
N-nitrosodiphenylamine	µg/L	grab	2/year	[1]
PAHs[8]	µg/L	24-hr composite	2/year	[1]
PCBs[9]	µg/L	24-hr composite	2/year	[1]
1,1,2,2-tetrachloroethane	µg/L	grab	2/year	[1]
TCDD equivalents[10]	µg/L	24-hr composite	2/year	[1]
Tetrachloroethylene	µg/L	grab	2/year	[1]
Toxaphene	µg/L	24-hr composite	2/year	[1]
Trichloroethylene	µg/L	grab	2/year	[1]
1,1,2-trichloroethane	µg/L	grab	2/year	[1]
2,4,6-trichlorophenol	µg/L	grab	2/year	[1]
Vinyl Chloride	µg/L	grab	2/year	[1]

[1] As required under 40 CFR 136.

[2] Dischargers may, at their option, meet this limitation (or apply this performance goal) as a total chromium limitation (or performance goal).

[3] If a Discharger can demonstrate to the satisfaction of the Regional Water Board (subject to USEPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by (or performance goals may be evaluated with) the combined measurement of free cyanide, simple alkali metals cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR 136, as revised May 14, 1999.

[4] HCH (hexachlorocyclohexane) represents the sum of the alpha, beta, gamma (Lindane), and delta isomers of hexachlorocyclohexane.

[5] Dichlorobenzenes represent the sum of 1,2- and 1,3-dichlorobenzene.

[6] DDD (dichlorodiphenyldichloroethane), DDE (dichlorodiphenyldichloroethylene), and DDT (dichlorodiphenyltrichloroethane) represent the sum of 4,4'DDT; 2,4'DDT; 4,4'DDE; 2,4'DDE; 4,4'DDD; and 2,4'DDD.

[7] Halomethanes represent the sum of bromoform, bromomethane (methyl bromide), and chloromethane (methyl chloride).

[8] PAHs (polynuclear aromatic hydrocarbons) represent the sum of acenapthalene; anthracene; 1,2-benzanthracene; 3,4-benzofluoranthene; benzo[k]fluoranthene; 1,1,2-benzoperylene; benzo[a]pyrene; chrysene; dibenzo[a,h]anthracene; fluorine; indeno[1,2,3-cd]pyrene; phenanthrene; and pyrene.

[9] PCBs (polychlorinated biphenyls) represent the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Arolclor-1254, and Arcolor-1260.

[10] TCDD equivalents represent the sum of concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown by the table below. USEPA Method 8280 may be used to analyze TCDD equivalents.

Isomer Group	Toxicity Equivalence Factor
2,3,7,8 – tetra CDD	1.0
2,3,7,8 – penta CDD	0.5
2,3,7,8 – hexa CDD	0.1
2,3,7,8 – hepta CDD	0.01
octa CDD	0.001
2,3,7,8 – tetra CDF	0.1
1,2,3,7,8 – penta CDF	0.05
2,3,4,7,8 – penta CDF	0.5
2,3,7,8 – hexa CDFs	0.1
2,3,7,8 – hepta CDFs	0.01
Octa CDF	0.001

[11] Endosulfan shall mean the sum of alpha-endosulfan, beta-endosulfan, and endosulfan sulfate.
[12] 1/day applies five days per week, except seven days per week for at least one week in July or August of each year.

2. The Discharger shall monitor effluent at EFF-002 as follows.

Table E-4. Effluent Monitoring at EFF-002 (SRTTP)

Parameter	Units	Sample Type	Minimum Sampling Frequency[3]	Required Analytical Test Method
Flow Rate[2]	MGD	Calculated	continuous	[1]
BOD_5@20°C	mg/L	24-hr composite	1/day	[1]
	% removal	calculate	1/day	[1]
$CBOD_5$@20°C	mg/L	24-hr composite	1/month	[1]
Total Suspended Solids	mg/L	24-hr composite	1/day	[1]
	% removal	calculate	1/day	[1]
Oil and Grease	mg/L	grab	1/week	[1]
Settleable Solids	ml/L	grab	1/day	[1]
Turbidity	NTU	grab	1/week	[1]
pH	units	grab	1/day	[1]

[1] As required under 40 CFR 136.
[2] Flow rate for EFF-002 shall be calculated from the difference of the measured flow rates from EFF-001 and EFF-003.
[3] 1/day applies five days per week, except seven days per week for at least one week in July or August of each year.

3. The Discharger shall monitor effluent at EFF-003 as follows.

Table E-5. Effluent Monitoring at EFF-003 (AWT at Haybarn Canyon)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow Rate	MGD	recorder/totalizer	continuous	[1]
Total Suspended Solids	mg/L	grab	1/week	[1]
Oil and Grease	mg/L	grab	1/month	[1]
Settleable Solids	ml/L	grab	1/week	[1]
Turbidity	NTU	grab	1/week	[1]
pH	units	grab	1/week	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Conductivity	mmhos/cm	Grab	1/week	[1]

[1] As required under 40 CFR 136.

Modification 12. The heading of Table E-4 of Attachment E shall be modified as follows:

~~Table E-4~~**Table E-6**. Whole Effluent Toxicity Testing **at EFF-001**

Modification 13. Section IX.E.5 of Attachment E shall be modified to be consistent with the Provisions section of Order R9-2008-0096, Section VI.C.5.b.ii.(a), as follows:

5. By ~~February~~March 1 of each year, the Discharger shall submit the annual Industrial Waste Survey report to the Regional Water Board describing its source control program activities over the previous calendar year as specified in Section VI.C.5.b.ii.(a) of Order No. R9-2008-0096.

I, David W. Gibson, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on **May 9, 2012**.

TENTATIVE
David W. Gibson
Executive Officer

Attachment A – Fact Sheet

1. As described in Section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

2. **Applicable Technology-Based Effluent Limitations.** The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. Therefore, discharge to the Pacific Ocean at Discharge Point No. 001 is subject to the Ocean Plan. Table A of the Ocean Plan establishes technology-based effluent limitations for oil and grease, suspended solids, settleable solids, turbidity, and pH. Table A effluent limitations apply to industrial discharges for which Effluent Limitation Guidelines (ELGs) have not been established pursuant to Sections 301, 302, or 306 of the federal CWA, including waste brine from the Advanced Water Treatment Facility at Haybarn Canyon (AWT). Table A requirements are summarized in Order No. R9-2008-0096, Attachment F, Table F-7.

   Consistent with concentration limitations, and in accordance with 40 CFR 122.45(f)(1), Order No. R9-2012-0041 also applies effluent mass emission rates (MERs), based on Table A and/or secondary treatment standards, at the individual discharges from the Facilities.

3. **Determining the Need for WQBELs.** Order No. R9-2008-0096 contained effluent limitations for chronic toxicity, copper, and total residual chlorine and performance goals for the remaining non-conventional and toxic pollutant parameters in Table B of the 1997 California Ocean Plan. For Order No. R9-2012-0041, the need for effluent limitations based on water quality objectives in Table B of the Ocean Plan was re-evaluated in accordance with 40 CFR 122.44(d) and guidance for statistically determining the "reasonable potential" for a discharged pollutant to exceed an objective, as outlined in the revised Technical Support Document for Water Quality-Based Toxics Control (TSD; EPA/505/2-90-001, 1991) and the Ocean Plan Reasonable Potential Analysis (RPA) Amendment that was adopted by the State Water Board on April 21, 2005. The statistical approach is described in Order No. R9-2008-0096, Attachment F, Section IV.C.3.

   Order No. R9-2008-0096 included a dilution factor (Dm) of 87, which was determined for the Oceanside Ocean Outfall (Oceanside OO) in 2005. The same Dm is applied to the RPA and water quality based effluent limitations established in this Order.

   Data for the comingled discharge of waste brine from AWT and effluent from the Southern Region Tertiary Treatment Plant (SRTTP) is not available. Influent data for the AWT, however, was provided by the Marine Corps Base, Camp Pendleton (Discharger), which included 47 out of 83 Table B parameters was available to conduct an RPA. The influent data for the AWT included four data sources: source well samples taken during 2009 (i.e. influent to the IM Plant), source well samples taken during 2008, effluent samples taken from the IM Plant in the 24 Area (i.e. influent to the AWT) during 2008-2009 timeframe, and a special effluent sampling event at the IM plant taken during August 2010. Effluent data for the AWT was projected based on the highest measured value for each parameter from the four data sources and based on the assumed concentration factor of 7 for the brine relative to the feed source. The projected brine effluent data was then combined with the

2007 SRTTP effluent data, assuming 1.73 MGD brine discharge and 3.6 MGD total combined discharge.

A summary of the RPA results is provided below:

Table F-8.b. RPA Results Summary for the AWT at Haybarn Canyon

Parameter (µg/L)	n[1]	MEC[2]			Most Stringent Criteria	Background	RPA End Point[3]
		AWT	SRTTP	Combined			
Arsenic	2	23.1	2.58	12.4	8[3]	3[6]	2
Cadmium	2	3.5	<1.11	2.3	1[3]	0	2
Chromium (VI)	2	9.8	<0.2	4.8	2[3]	0	2
Copper	2	350	54.6	196.4	3[3]	2[6]	1
Lead	2	35	6.04	19.94	2[3]	0	2
Mercury	2	0.7	<0.2	0.44	0.004[3]	0.0005[6]	2
Nickel	2	35	3.42	18.58	5[3]	0	2
Selenium	2	35	3.46	18.60	15[3]	0	2
Silver	2	3.5	<1.11	2.26	0.7[3]	0.16[6]	2
Zinc	2	350	220	282.4	20[3]	8[6]	2
Cyanide	0	No data	<10		1[3]	0	3
Total Residual Chlorine	0	No data	1,133		2[3]	0	3
Ammonia	0	No data	5,575		600[3]	0	3
Acute Toxicity	0	No data	1.64		0.3[4]	0	3
Chronic Toxicity	0	No data	40		1[4]	0	3
Phenolic Compounds	0	No data	<26		30[3]	0	3
Chlorinated Phenolics	0	No data	<0.15		1[3]	0	3
Endosulfan	0	No data	<0.016		0.009[3]	0	3
Endrin	1	<0.7	<0.011	<0.34	0.002[3]	0	1
HCH	1	<1.4	<0.005	<0.67	0.004[3]	0	1
Radioactivity (pCi/L)	0	No data	11.99		[7]	0	[7]
Acrolein	0	No data	<20		220[5]	0	3
Antimony	1	<42	<1.11	<20.74	1,200[5]	0	2
Bis(2-chloroethoxyl)methane	0	No data	<15.4		4.4[5]	0	3
Bis(2-chloroisopropyl)ether	0	No data	<15.4		1,200[5]	0	3
Chlorobenzene	0	No data	<2		570[5]	0	3
Chromium (III)	1	<70	<1.11	34.18	190,000[5]	0	2
Di-n-butyl phthalate	0	No data	<15.4		3,500[5]	0	3
Dichlorobenzenes	1	<7	<2	<4.4	5,100[5]	0	2
Diethyl phthalate	0	No data	<15.4		33,000[5]	0	3
Dimethyl phthalate	0	No data	<15.4		820,000[5]	0	3
4,6-Dinitro-2-methylphenol	0	No data	<15.4		220[5]	0	3
2,4-Dinitrophenol	0	No data	<38.5		4.0[5]	0	3
Ethylbenzene	2	<3.5	<2	<2.72	4,100[5]	0	2
Fluoranthene	0	No data	<15.4		15	0	3
Hexachlorocyclopentadiene	1	<7	<15.4	<11.4	58[5]	0	2
Nitrobenzene	0	No data	<15.4		4.9[5]	0	3
Thallium	1	<7	<1.11	<3.94	2[5]	0	2
Toluene	2	<3.5	<2	<2.72	85,000[5]	0	2
Tributyltin	0	No data	<0.005		0.0014[5]	0	3
1,1,1-Trichloroethane	1	<3.5	<2	<2.72	540,000[5]	0	2
Acrylonitrile	0	No data	<10		0.10[5]	0	3
Aldrin	1	<0.525	<0.005	<0.255	0.000022[5]	0	1
Benzene	2	<3.5	<2	<2.72	5.9[5]	0	2

Parameter (µg/L)	n[1]	MEC[2]			Most Stringent Criteria	Background	RPA End Point[3]
		AWT	SRTTP	Combined			
Benzidine	0	No data	<38.5		0.000069[5]	0	3
Beryllium	1	<7	<1.11	<3.94	0.033[5]	0	1
Bis(2-chloroethyl) Ether	0	No data	<15.4		0.045[5]	0	3
Bis(2-ethylhexyl) phthalate	0	No data	<15.4		3.5[5]	0	3
Carbon tetrachloride	1	<3.5	<2	<2.72	0.90[5]	0	2
Chlordane	0	No data	<0.022		0.000023[5]	0	3
Chlorodibromomethane	1	<7	8.85	7.96	8.6[5]	0	2
Chloroform	1	<7	8.2	7.6	130[5]	0	2
DDT	0	No data	<0.011		0.00017[5]	0	3
1,4-Dichlorobenzene	1	<3.5	<2	<2.72	18[5]	0	2
3,3-Dichlorobenzidine	0	No data	<38.5		0.0081[5]	0	3
1,2-Dichloroethane	1	<3.5	<2	<2.72	28[5]	0	2
1,1-Dichloroethylene	2	<3.5	<2	<2.72	0.9[5]	0	2
Dichlorobromomethane	1	<7	11.3	9.24	6.2[5]	0	2
Dichloromethane	1	<35	<2	<17.8	450[5]	0	2
1,3-Dichloropropene	1	<3.5	<2	<2.72	8.9[5]	0	2
Dieldrin	1	<0.14	<0.011	<0.073	0.00004[5]	0	1
2,4-Dinitrotoluene	2	<35	<15.4	<24.8	2.6[5]	0	3
1,2-Diphenylhydrazine	0	No data	<15.4		0.16[5]	0	3
Halomethanes	0	No data	2.13		130[5]	0	3
Heptachlor	--	<0.7	<0.005	<0.036	0.00005[5]	0	1
Heptachlor Epoxide	--	<0.7	<0.005	<0.036	0.00002[5]	0	1
Hexachlorobenzene	--	<3.5	<15.4	<9.7	0.00021[5]	0	1
Hexachlorobutadiene	--	<3.5	<15.4	<9.7	14[5]	0	2
Hexachloroethane	0	No data	<15.4		2.5[5]	0	3
Isophorone	0	No data	<15.4		730[5]	0	3
N-nitrosodimethylamine	0	No data	<15.4		7.3[5]	0	3
N-nitrosodi-N-propylamine	0	No data	<15.4		0.38[5]	0	3
N-nitrosodiphenylamine	0	No data	<15.4		2.5[5]	0	3
PAHs	--	<0.7	<10.9	<6.0	0.0088[5]	0	1
PCBs	--	<24.5	<0.108	<11.82	0.000019[5]	0	1
TCDD equivalents (pg/L)	--	<35	<1,400	<744.8	0.0000000039[5]	0	1
1,1,2,2-Tetrachoroethane	--	<3.5	<2	<2.72	2.3[5]	0	2
Tetrachloroethylene	--	<3.5	<2	<2.72	2.0[5]	0	2
Toxaphene	--	<7	<0.1	<3.4	0.00021[5]	0	1
Trichloroethylene	--	<3.5[9]	<2	<2.72	27[5]	0	2
1,1,2-Trichloroethane	--	<3.5	<2	<2.72	9.4[5]	0	2
2,4,6-Trichlorophenol	--	No data	<15.4		0.29[5]	0	3
Vinyl Chloride	--	<3.5	<5	<4.28	36[5]	0	2

[1] Number of data points available for the RPA.

[2] If there is a detected value, the highest reported value is summarized in the table. For ND values, "<MDL" is used in the table. For DNQ values, "<ML" is used in the table. The MEC does not account for dilution. The RPA does account for dilution; therefore it is possible for a parameter with an MEC in exceedance of the most stringent criteria not to present a RP (i.e., Endpoint 1).

[3] Based on the 6-Month Median in the Table B of the Ocean Plan

[4] Based on the Daily Maximum in Table B of the Ocean Plan

[5] Based on 30-Day Average in Table B of the Ocean Plan

[6] Background concentrations contained in Table C of the Ocean Plan

[7] Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the California Code of Regulations. Radiation at levels that exceed the applicable criteria are not expected in the discharge.

[8] End Point 1 – RP determined, limit required, monitoring required

End Point 2 – Discharger determined not to have RP, monitoring may be established.
End Point 3 – RPA was inconclusive, carry over previous limits if applicable, establish monitoring.

[9] Trichloroethylene will be removed from the feed water at the AWT by the granular activated carbon train

Performance goals from Order No. R9-2008-0096 are retained for constituents for which RPA results indicated Endpoint 2 and Endpoint 3. Reasonable Potential (Endpoint 1) to exceed water quality objectives contained within the Ocean Plan was determined for copper, endrin, HCH, aldrin, beryllium, dieldrin, heptachlor, heptachlor epoxide, hexachlorobenzene, PCHs, PCBs,TCDD equivalents, and toxaphene. Thus effluent limitations for these parameters have been established in Order No. R9-2012-0041 based on the initial dilution of 87, as discussed in Order No. R9-2008-0096, Fact Sheet, Section IV.C.4.

4. **Special Provisions for Wastewater Facilities – Biosolids.** Order No. R9-2012-0041 corrects the due date for biosolids annual report from February 1 to February 19.

5. In an email dated November 3, 2011, a consultant for the Discharger stated that there were no standards available in the U.S. for chlordene-alpha and chlordene-gamma and asked that these two compounds be dropped from the formula for chlordane. By email dated November 28, 2011, Bill Ray, Environmental Scientist, State Water Board agreed that chlordene-alpha and chlordene-gamma could be dropped from the formula for chlordane due to a lack of standards in the U.S.

6. **Rationale for Monitoring and Reporting Requirements.**

   a. Influent Monitoring. Order No. R9-2012-0041 changes the existing Monitoring Location (INF-001) to represent samples of the influent from SRTTP only.

   b. Effluent Monitoring. Order No. R9-2012-0041 changes the existing Monitoring Location (EFF-001) to represent the commingled effluent from SRTTP and AWT; adds a Monitoring Location (EFF-002) for the final effluent from SRTTP, where representative samples of effluent treated solely at SRTTP can be collected; and adds effluent monitoring for the proposed discharge of waste brine from the AWT (Monitoring Location EFF-003). The changes to the monitoring location description and the additional monitoring locations for each of the discharges from Discharger to the Oceanside OO is required to determine compliance with the applicable technology-based effluent limitations. Effluent monitoring to determine compliance with WQBELs is required at a location where representative samples of commingled effluent from all contributors to the SJCOO can be taken (Monitoring Location M-001)

7. **Industrial Waste Survey Report.** Order No. R9-2008-0096 contains two different due dates for the Industrial Waste Survey report; March 1 (Section VI.C.5.b.ii.(a)) and February 1 (Attachment E, Section XI.E.5). Order No. R9-2012-0041 changes the due date in Attachment E, Section XI.E.5 to March 1 to match the March 1 due date specified in Section VI.C.5.b.ii.(a).